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PATENT

Attorney Docket No.: BIO1100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Woodbury et al. Art Unit: 1633
Application No.: 10/671,995 Examiner: Maria Marvich
Filed: September 26, 2003 Confirmation No.: 3882
Title: RECOMBINANT FUSION PROTEINS WITH HIGH AFFINITY
BINDING TO GOLD AND APPLICATIONS THEREOF

MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL SHEET

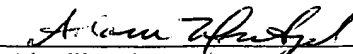
Sir:

Transmitted herewith for the above-identified application, please find:

1. Information Disclosure Statement (2 pgs.);
2. PTO Form 1449 (4 pgs.);
3. 39 References; and
4. Return Receipt Postcard.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on May 4, 2006, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Adam Wentzel

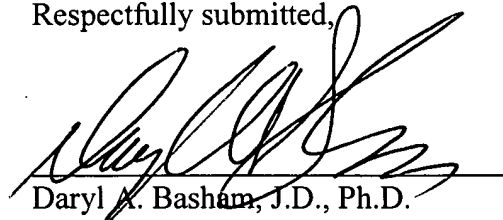
May 4, 2006

In re Application of:
Woodbury et al.
Application No.: 10/671,995
Filed: September 26, 2003
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PATENT
Attorney Docket No.: BIO1100

No fee is deemed necessary in connection with the filing of this paper. However, if any fee is required, authorization is hereby given to charge the amount of any such fee, or credit any overpayment, to Deposit Account No. 07-1896 referencing the above-identified attorney docket number. A copy of this Transmittal Sheet is enclosed.

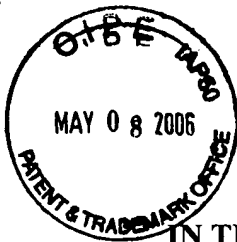
Respectfully submitted,



Date: May 4, 2006

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PATENT
Attorney Docket No.: BIO1100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Woodbury et al.	Art Unit:	1633
Application No.:	10/671,995	Examiner	Maria Marvich
Filed:	September 26, 2003	Confirmation No.:	3882
Title:	RECOMBINANT FUSION PROTEINS WITH HIGH AFFINITY BINDING TO GOLD AND APPLICATIONS THEREOF		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. § 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, the references are listed on the attached Form PTO-1449 and copies of the references are enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

CERTIFICATION UNDER 37 CFR §1.8

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Adam Wentzel

May 4, 2006

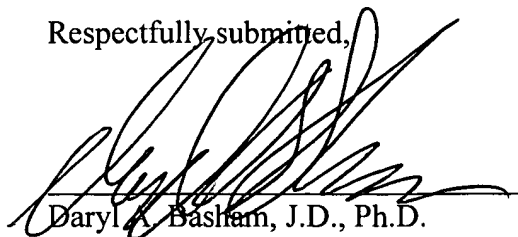
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FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Docket No. BIO1100	Serial No.: 10/671,995
	Applicant(s): Woodbury et al.	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: September 26, 2003	Group Art Unit: 1633

U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION (YES/NO)

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

	AA	Alvarez-Icaza et al., "The Design of Enzyme Sensors Based on the Enzyme Structure" Biosensors & Bioelectronics 10:735-742, 1995
	AB	Bain et al., "Formation of Monolayer Films by the Spontaneous Assembly of Organic Thiois from Solution onto Gold" J. Am. Chem. Soc. 111:321-335, 1989
	AC	Bornstein and Balian, "Cleavage at Asn-Gly Bonds with Hydroxylamine" Methods Enzymol 47:132-145, 1977
	AD	Brown, Stanley "Metal-Recognition by Repeating Polypeptides" Nature Biotechnology 15:269-272, 1997
	AE	Chen et al., "Purification and Characterization of Recombinant Histidine-Tagged Human Platelet 12-Lipoxygenase Expressed in a Baculovirus/Insect Cell System" European Journal Biochemistry 214:845-852, 1993
	AF	Chilkoti et al., "Site-Directed Mutagenesis Studies of the High-Affinity Streptavidin-Biotin Complex: Contributions of Tryptophan Residues 79, 108, and 120" Proc. Natl. Acad. Sci. USA 92:1754- 1758, 1995
	AG	Clackson et al., "Making Antibody Fragments Using Phage Display Libraries" Nature 352:624-628, 1991
	AH	Elkind et al., "Integrated Analytical Sensors: The Use of the TISPR-1 as a Biosensor" Sensors & Actuators B54:182-190, 1999
	AI	Engel et al., "Kinetic and Structural Characterization of Adsorption-Induced Unfolding of Bovine α -Lactalbumin" Journal of Biological Chemistry 277/19:10922-10930, 2002

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)		
	AJ	Ferapontova et. al, "Effect of Cysteine Mutations on Direct Electron Transfer of Horseradish Peroxidase on Gold" Biosensors and Bioelectronics 17:953-963, 2002
	AK	Ferapontova et. al., "Mediatorless Biosensor for H ₂ O ₂ Based on Recombinant Forms of Horseradish Peroxidase Directly Adsorbed on Polycrystalline Gold" Biosensors and Bioelectronics 16:147- 157, 2001
	AL	Frederick et al., "Glucose Oxidase from Aspergillus Niger" J. Biol. Chem. 265/7:3793-3802, 1990
	AM	Geoghegan, William, "Effect of Three Variables on Adsorption of Rabbit IgG to Colloidal Gold" J. Histochemistry and Cytochemistry 36/4:401-407, 1988
	AN	Grigorenko et. al., "New Approaches for Functional Expression of Recombinant Horseradish Peroxidase C in Escherichia Coli" Biocatalysis and Biotransformation 17/5:359-380, 1999
	AO	Horisberger and Clerc, "Labelling of Colloidal Gold with Protein A" Histochemistry 82:219-223, 1985
	AP	Huston et al., "Protein Engineering of Antibody Binding Sites: Recovery of Specific Activity in an Anti-Digoxin Single-Chain Fv Analogue Produced in Escherichia Coli" Proc. Natl. Acad. Sci. USA 85:5879-5883, 1988
	AQ	Jenny et al., "A Critical Review of the Methods for Cleavage of Fusion Proteins with Thrombin and Factor Xa" Protein Expr Purif. 31(1):1-11, 2003
	AR	Jonsson et al, "Real-Time Biospecific Interaction Analysis Using Surface Plasmon Resonance and a Sensor Chip Technology" BioTechniques 11:620-627, 1991
	AS	Ketema el al., "Assessment of the Performance of a Rapid, Lateral Flow Assay for the Detection of Antibodies to HIV" Journal of Acquired Immune Deficiency Syndrome 27:63-70, 2001
	AT	Kiess et al., "Glucose Oxidase from Penicillium Amagasakiense" Eur. J. Biochem. 252:90-99, 1998
	AU	Kipriyanov et al., "Single-Chain Antibody Streptavidin Fusions: Tetrameric Bifunctional scFv-Complexes with Biotin Binding Activity and Enhanced Affinity to Antigen" Hum. Antibodies Hybridomas 6(3):93-101, 1995
	AV	Ko et al., "Secretory Expression and Purification of Aspergillus Niger Glucose Oxidase in Saccharomyces Cerevisiae Mutant Deficient in PMR1 Gene" Protein Expression and Purification 25:488-493, 2002

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	AW	Levy et. al., "Oxidation of 4-Bromophenol by the Recombinant Fused Protein Cellulose-Binding Domain-Horseradish Peroxidase Immobilized on Cellulose" Biotechnology and Bioengineering 82:223-231, 2003
	AX	Loertscher and Lavery, "Role of Glycosyl Phosphatidyl Inositol (GPI)-Anchored Cell Surface Proteins in T-Cell Activation" Transplant Immunology 9:93-96, 2002
	AY	Lofas and Johnsson, "Novel Hydrogel Matrix on Gold Surfaces in Surface Plasmon Resonance Sensors for Fast and Efficient Covalent Immobilization of Ligands" J. Am. Chem. Soc. Commun. 1526-1528, 1990
	AZ	Melendez et al., "Commercial Solution for Surface Plasmon Sensing" Sensors & Actuators B35-36:212-216, 1996
	BA	Nilsson et al., "Synthetic IgG-Binding Domain Based on Staphylococcal Protein A" Protein Engineering 1/2:107-113, 1987
	BB	Park et al., "Expression of Glucose Oxidase by Using Recombinant Yeast" Journal of Biotechnology 81:35-44, 2000
	BC	Postel et al., "Structure and Denaturation of Adsorbed Lysozyme at the Air-Water Interface" Journal of Colloid and Interface Science 266/1:74-81, 2003
	BD	Ruzgas et. al., "Peroxidase-Modified Electrodes: Fundamentals and Application" Analytica Chimica Acta 330:123-138, 1996
	BE	Sano et al., "Recombinant Core Streptavidins" Journal of Biological Chemistry 270/47:28204-28209, 1995
	BF	Schlenoff et al., "Stability and Self-Exchange in Alkanethiol Monolayers" J. Am. Chem. Soc. 117:12528-12536, 1995
	BG	Scopsi et al., "Nonspecific Immunocytochemical Reactions with Certain Neurohormonal Peptides and Basic Peptide Sequences" Journal of Histochemistry and Cytochemistry 34/11:1469-1475, 1986
	BH	Terpe, K., "Overview of Tag Protein Fusions: From Molecular and Biochemical Fundamentals to Commercial Systems" Appl. Microbiol. Biotechnol. 60:523-533, 2003
	BI	Teske et al., "Yeast Cytochrome C Peroxidase Expression in Escherichia Coli and Rapid Isolation of Various Highly Pure Holoenzymes" Protein Expr. Purif. 19/1:139-147, 2000
	BJ	Wang et al., "Production of Active Recombinant Human Chymase from a Construct Containing the Enterokinase Cleavage Site of Trypsinogen in Place of the Native Propeptide Sequence" Biol. Chem. Hoppe-Seyler 376:681-684, 1995

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	BK	Witt et al., "Structural and Kinetic Properties of Nonglycosylated Recombinant Penicillium Amagasakiense Glucose Oxidase Expressed in Escherichia Coli" Applied and Environmental Microbiology 64:1405-1411, 1998
	BL	Woodbury et al., "Construction of Biosensors Using a Gold-Binding Polypeptide and a Miniature Integrated Surface Plasmon Resonance Sensor" Biosensors & Bioelectronics, 13:1117-1126, 1998
	BM	Zeravik et al., "Highly Sensitive Flow-Through Amperometric Immunosensor Based on the Peroxidase Chip and Enzyme-Channeling Principle" Biosens. Bioelectron. 18:1321-1327, 2003

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